**IN THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF TEXAS
WACO DIVISION**

WSOU INVESTMENTS, LLC d/b/a BRAZOS LICENSING AND DEVELOPMENT,	§ § § §	NO. 6:20-cv-482-ADA
Plaintiff,	§ § §	**JURY TRIAL DEMANDED**
v.	§ §	
DELL TECHNOLOGIES INC., DELL INC., AND EMC CORPORATION,	§ § § §	
Defendants.	§	

FIRST AMENDED COMPLAINT FOR PATENT INFRINGEMENT

Plaintiff WSOU Investments, LLC d/b/a Brazos Licensing and Development ("Brazos" or "Plaintiff"), by and through its attorneys, files this First Amended Complaint ("Amended Complaint" or "Complaint") for Patent Infringement against Dell Technologies Inc., Dell Inc., and EMC Corporation (collectively, "Defendants") and alleges:

NATURE OF THE ACTION

1.   This is a civil action for patent infringement arising under the Patent Laws of the United States, 35 U.S.C. §§ 1, et seq., including §§ 271, 281, 284, and 285.

THE PARTIES

2.   Brazos is a limited liability corporation organized and existing under the laws of Delaware, with its principal place of business at 605 Austin Avenue, Suite 6, Waco, Texas 76701.

3.   On information and belief, defendant Dell Technologies Inc. is a Delaware corporation with a principal place of business at One Dell Way, Round Rock, Texas 78682.

4.   On information and belief, defendant Dell Inc. is a Delaware corporation with a principal place of business at One Dell Way, Round Rock, Texas 78682. Dell Inc. is wholly owned by its corporate parent, Dell Technologies Inc.

5.   On information and belief, defendant EMC Corporation is a Massachusetts corporation with a principal place of business at One Dell Way, Round Rock, Texas 78682. EMC Corporation is wholly owned by its corporate parent, Dell Technologies Inc.

JURISDICTION AND VENUE

6.   This is an action for patent infringement which arises under the Patent Laws of the United States, in particular, 35 U.S.C. §§ 271, 281, 284, and 285.

7.   This Court has jurisdiction over the subject matter of this action under 28 U.S.C. §§ 1331 and 1338(a).

8.   This Court has specific and general personal jurisdiction over each defendant pursuant to due process and/or the Texas Long Arm Statute, because each defendant has committed acts giving rise to this action within Texas and within this judicial district. The Court's exercise of jurisdiction over each defendant would not offend traditional notions of fair play and substantial justice because each defendant has established minimum contacts with the forum. For example, on information and belief, each defendant has committed acts of infringement in this judicial district, by among other things, selling and offering for sale products that infringe the asserted patent, directly or through intermediaries, as alleged herein.

9.   Venue in the Western District of Texas is proper pursuant to 28 U.S.C. §§1391 and/or 1400(b). Each defendant has established places of business in the Western District of Texas. Each defendant is registered to do business in Texas. Upon information and belief, each defendant has transacted business in this District and has committed acts of infringement in this District.

COUNT ONE - INFRINGEMENT OF
## U.S. PATENT NO. 7,424,020

10.   Brazos re-alleges and incorporates by reference the preceding paragraphs of this Complaint.

11.   On September 9, 2008, the United States Patent and Trademark Office duly and legally issued U.S. Patent No. 7,424,020 ("the '020 Patent'"), entitled "Network Nodes." A true and correct copy of the '020 Patent is attached as Exhibit A to this Complaint.

12.   Brazos is the owner of all rights, title, and interest in and to the '020 Patent, including the right to assert all causes of action arising under the '020 Patent and the right to any remedies for the infringement of the '020 Patent.

13.   Defendants make, use, sell, offer for sale, import, and/or distribute in the United States, including within this judicial district, products such as, but not limited to, Dell Edge Gateways (collectively, the "Accused Products").

14.   The Accused products Connect various wired and wireless devices and systems. The Edge Gateway   aggregates and   analyzes the data at the input and then transports it further.

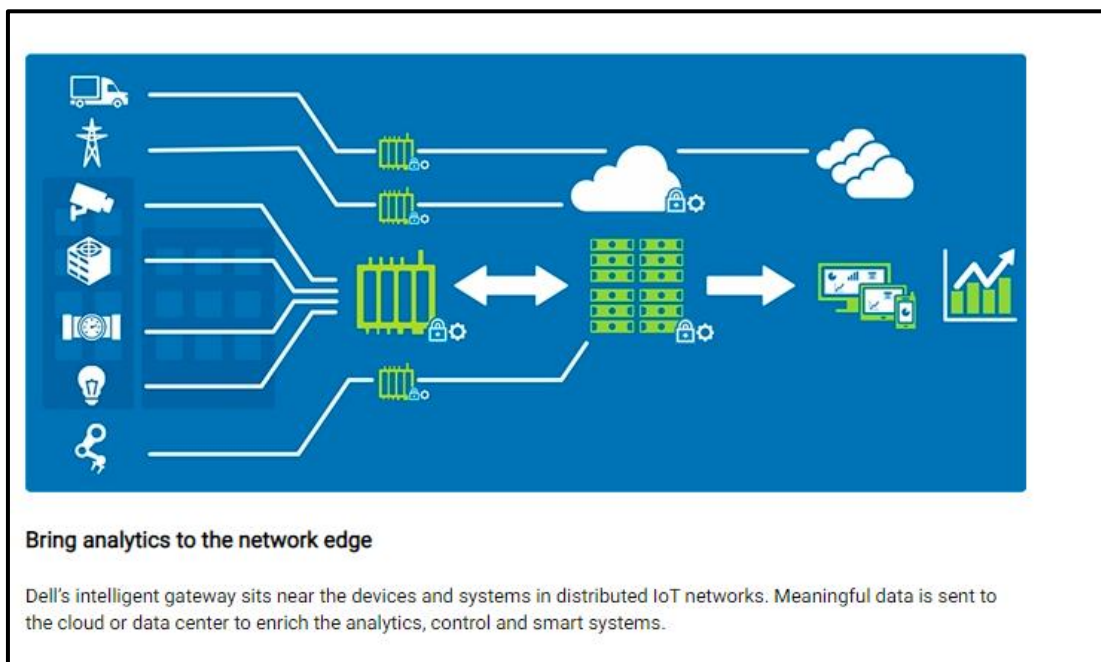https://www.dell.com/en-us/work/shop/gateways-embedded-computing/sf/edge-gateway
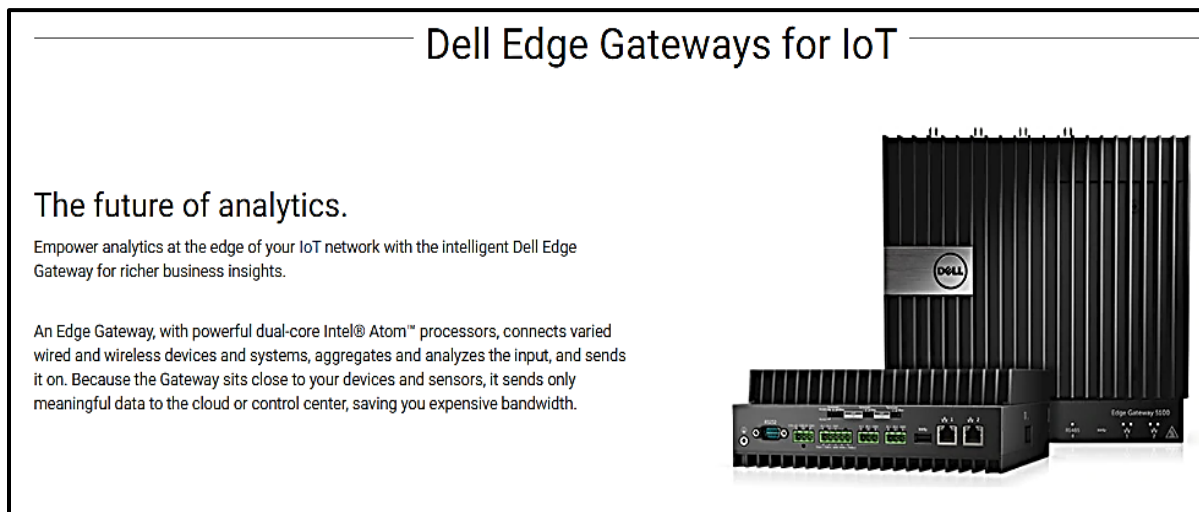
15.   The Accused Products include interfaces for connecting the physical world, bridging both legacy systems and modern sensors (i.e. multiple terminals) to the network   (i.e. communication network).

Connect more things.

The Edge Gateway includes a wide variety of wired and wireless connections, including serial connections. The I/O on the intelligent device makes it easy to connect your legacy industrial systems and your new mesh networks. The Gateway uses Wi-Fi, WWAN and Ethernet to connect and communicate. Then the processing power of the Gateway supports middleware to aggregate, convert and normalize data from all the disparate protocols – from ModBus to BACnet to ZigBee and more.

https://www.dell.com/en-us/work/shop/gateways-embedded-computing/sf/edge-gateway

Bring analytics to the network edge

Dell's intelligent gateway sits near the devices and systems in distributed IoT networks. Meaningful data is sent to the cloud or data center to enrich the analytics, control and smart systems.

https://www.dell.com/ae/business/p/dell-edge-gateway-5000/pd

16.   The Accused Product consists of multiple input and output interfaces and protocols to provide. A CANbus interface (i.e., first interface) connects legacy systems (i.e. multiple

terminals) to the Accused Products (i.e. node). The Accused Products further have a Fast Ethernet

interface (i.e. second interface for connecting to a communication network) to gain network access.

Model Number	Dell Edge Gateway 3001 Model For: General-Purpose Automation	Dell Edge Gateway 3002 Model For: Transportation/ Logistics	Dell Edge Gateway 3003 Model For: Media/Retail Kiosks
Dimensions	125 mm wide x 125 mm high x 51 mm deep (4.9 x 4.9 x 2 inches).		
Form factor	Fanless and headless (video port on 3003 only). Mounting optimized for 75x75mm VESA, wall (standard) mounting and DIN-rail mounting. Additional mounting options include perpendicular DIN-rail mount, quick-release DIN-rail mount, and cable management control bars for standard mounting		
Weight	1 kg +/- 0.02 kg (2.2lbs +/- 0.04lbs)		
Processor Speed / Cache	Intel® Atom™ E3805 dual core 1.33 GHz / 1 MB	Intel® Atom™ E3805 dual core 1.33 GHz / 1 MB	Intel® Atom™ E3815 + 400 dual core+ MHz GPU 1.46 GHz / 512 KB
Operating system	Ubuntu Core 16, Ubuntu Server 18.04 and Windows 10 IoT Enterprise 2016 LTSB (only with 32GB eMMC).		
Memory	2 GB, DDR3L – 1066 MHz		
Drive/Storage	Industrial-grade Micro-SD card: 8GB / 16GB / 32 GB / 64 GB (Contact Dell OEM Sales for larger options.) Embedded multi-media controller (eMMC): 8GB standard / 32GB option with WWAN.		
I/O (Per Model)	1 x 10/100 Fast Ethernet (RJ-45) with PoE (15.4W) Serial Interfaces: 2 x RS-232/422/485. GPIO Multi-function I/O: 0-5V, 8 channel, independently programmable, DAC, ADC. Optional ZigBee module.	2 x 10/100 Fast Ethernet (RJ-45). Main port supports PoE (15.4W) Wireless PAN: Bluetooth Low Energy and integrated zigbee/802.15.4 module for mesh networking. CANbus / Controller Area Network (CAN2.0 A/B/FD) 1Mbps (CAN2.0), 5Mbps (CAN-FD).	2 x 10/100 Fast Ethernet (RJ-45). Main port supports PoE (15.4W) Video: DisplayPort 1.1; resolution 2560x1600@60Hz) Audio: 3.5mm Line Out/Line In; Re-alTek codec for data-compressed, multi-channel streaming. Optional ZigBee module.
I/O (All models)	USB: 1 x USB 2.0, 1 x USB 3.0		

https://i.dell.com/sites/doccontent/shared-content/data-sheets/en/Documents/Dell_Edge_Gateway_3000_Series_spec_sheet.pdf

6	Ethernet port one (with Power over Ethernet support)	Connect an Ethernet (RJ45) cable to gain network access. Provides data transfer speeds up to 10/100 Mbps and supports Alternative A of the IEEE 802.3af standard. ⓘ NOTE: The Edge Gateway is an IEEE 802.3af Alternative A compliant Powered Device (PD).

https://topics-cdn.dell.com/pdf/dell-edge-gateway-3000-series_users-guide2_en-us.pdf

Take control

Network natively: Each device comes equipped with a CAN bus interface and integrated ZigBee for mesh networking. This allows seamless communication to the many sensors and systems, whether it's in a vehicle, rail use, marine use and even aircrafts. This makes it cheaper and easier to "talk" to the many sensors and systems that use CAN without wasting an I/O slot.

Power your work with ease: Experience an uninterrupted work flow with Intel® Atom™ E3805, 2GB RAM, and 8GB eMMC (32GB w/WWAN).

Track your mobile assets: Integrated GPS, accelerometer and atmospheric pressure sensors enable efficient mobile use cases and geo-referenced asset management.

Stay connected: Connect via Ethernet (10/100), WWAN/Cellular, WLAN/Bluetooth LE/Wi-Fi, dual Ethernet, integrated zigbee and benefit from intuitive mesh networking.

https://www.dell.com/en-us/work/shop/cty/pdp/spd/dell-edge-gateway-3002/ctoi3002stdus#features_section

17.   The Accused Products include a processor (i.e. control unit) that removes a portion of protocol layers from the data received from the network   (i.e. communication network) and streams the remaining data to be transmitted to a bus on the legacy system   .

Analytics at the edge
The Dell Edge Gateway 5000 Series is designed to aggregate, secure and relay data from diverse sensors and equipment. The Intel® Atom™ processor provides capacity to perform local analytics so only meaningful information is sent to the next tier, which could be another gateway, the datacenter or the cloud. This minimizes consumption of expensive network bandwidth and reduces overall solution latency.

https://www.softwareag.com/es/images/454421_en_tcm411-169242.pdf

18.   The Accused Products provide a protocol converter.   When Layer 3 data has to be transmitted into a Layer 2 network, the   protocol data is removed by the protocol converter

(i.e. removes protocol data from a portion of protocol layers from a data stream received from the communication network via the second interface).

https://www.advantech.com/products/industrial-iot-edge-gateway/sub_9a0cc561-8fc2-4e22-969c-9df90a3952b5

19.   The Accused Products comprise a Fast Ethernet interface that is used to provide network access (i.e., second interface providing access to communication network) with help of a router. The router assigns an IP address to the Accused Product.

Model Number	Dell Edge Gateway 3001 Model For: General-Purpose Automation	Dell Edge Gateway 3002 Model For: Transportation/ Logistics	Dell Edge Gateway 3003 Model For: Media/Retail Kiosks
Dimensions	125 mm wide x 125 mm high x 51 mm deep (4.9 x 4.9 x 2 inches).		
Form factor	Fanless and headless (video port on 3003 only). Mounting optimized for 75x75mm VESA, wall (standard) mounting and DIN-rail mounting. Additional mounting options include perpendicular DIN-rail mount, quick-release DIN-rail mount, and cable management control bars for standard mounting		
Weight	1 kg +/- 0.02 kg (2.2lbs +/- 0.04lbs)		
Processor Speed / Cache	Intel® Atom™ E3805 dual core 1.33 GHz / 1 MB	Intel® Atom™ E3805 dual core 1.33 GHz / 1 MB	Intel® Atom™ E3815 + 400 dual core+ MHz GPU 1.46 GHz / 512 KB
Operating system	Ubuntu Core 16, Ubuntu Server 18.04 and Windows 10 IoT Enterprise 2016 LTSB (only with 32GB eMMC).		
Memory	2 GB, DDR3L – 1066 MHz		
Drive/Storage	Industrial-grade Micro-SD card: 8GB / 16GB / 32 GB / 64 GB (Contact Dell OEM Sales for larger options.) Embedded multi-media controller (eMMC): 8GB standard / 32GB option with WWAN.		
I/O (Per Model)	1 x 10/100 Fast Ethernet (RJ-45) with PoE (15.4W) Serial Interfaces: 2 x RS-232/422/485. GPIO Multi-function I/O: 0-5V, 8 channel, independently programmable, DAC, ADC. Optional ZigBee module.	2 x 10/100 Fast Ethernet (RJ-45). Main port supports PoE (15.4W) Wireless PAN: Bluetooth Low Energy and integrated zigbee/802.15.4 module for mesh networking. CANbus / Controller Area Network (CAN2.0 A/B/FD) 1Mbps (CAN2.0), 5Mbps (CAN-FD).	2 x 10/100 Fast Ethernet (RJ-45). Main port supports PoE (15.4W) Video: DisplayPort 1.1; resolution 2560x1600@60Hz) Audio: 3.5mm Line Out/Line In; RealTek codec for data-compressed, multi-channel streaming. Optional ZigBee module.
I/O (All models)	USB: 1x USB 2.0, 1x USB 3.0		

https://i.dell.com/sites/doccontent/shared-content/data-

sheets/en/Documents/Dell_Edge_Gateway_3000_Series_spec_sheet.pdf

6	Ethernet port one (with Power over Ethernet support)	Connect an Ethernet (RJ45) cable to gain network access. Provides data transfer speeds up to 10/100 Mbps and supports Alternative A of the IEEE 802.3af standard. ⓘ NOTE: The Edge Gateway is an IEEE 802.3af Alternative A compliant Powered Device (PD).

https://topics-cdn.dell.com/pdf/dell-edge-gateway-3000-series_users-guide2_en-us.pdf

1. Connect a network cable from Ethernet port one on the Edge Gateway to a DHCP-enabled network or router that provides IP addresses.
2. In your network's DHCP server, use the command dhcp-lease-list to obtain the IP address associated with the Edge Gateway's MAC address.

https://topics-cdn.dell.com/pdf/dell-edge-gateway-3000-series_users-guide2_en-us.pdf

Take control

Network natively: Each device comes equipped with a CAN bus interface and integrated ZigBee for mesh networking. This allows seamless communication to the many sensors and systems, whether it's in a vehicle, rail use, marine use and even aircrafts. This makes it cheaper and easier to "talk" to the many sensors and systems that use CAN without wasting an I/O slot.

Power your work with ease: Experience an uninterrupted work flow with Intel® Atom™ E3805, 2GB RAM, and 8GB eMMC (32GB w/WWAN).

Track your mobile assets: Integrated GPS, accelerometer and atmospheric pressure sensors enable efficient mobile use cases and geo-referenced asset management.

Stay connected: Connect via Ethernet (10/100), WWAN/Cellular, WLAN/Bluetooth LE/Wi-Fi, dual Ethernet, integrated zigbee and benefit from intuitive mesh networking.

https://www.dell.com/en-us/work/shop/cty/pdp/spd/dell-edge-gateway-3002/ctoi3002stdus#features_section

20. Fast Ethernet operates in a star-wired bus topology (i.e. communication network is a bus system).

Fast Ethernet (100Mb) Network Speed

Fast Ethernet was the first-ever throughput extension of the switched Ethernet standard beyond 10 Mbps. Fast Ethernet (IEEE 802.3u) has a maximum data rate of 100 Mbps and is the first Ethernet standard created specifically to operate in a star wired bus topology. Fast Ethernet standards for fiber include 100Base-FX, 100Base-SX, 100Base-BX10 and 100Base-LX10. Fast Ethernet standards for copper include 100Base-TX, 100Base-T4 and 100Base-T2, 100Base-T1 and 100BaseVG.

https://www.transition.com/lines/network-switches/switch-network-speed/network-speed-fast-ethernet/

21. The Accused Products   connect   with the physical world   by bridging both legacy systems and modern sensors to the internet. One can aggregate and normalize virtually any data source, ranging from industry-standard protocols such as BACNet, Modbus, and CANbus, to modern wireless mesh networks like ZigBee and 6LoWPAN.

> **Expanded I/O and communication protocols**
> Make the most of the equipment you already have and expand capabilities with new technologies. Connect broadly with the physical world using Dell IoT gateways, bridging both legacy systems and modern sensors to the internet. With the right physical I/O and our certified ISV middleware, you can aggregate and normalize virtually any data source, ranging from industry-standard protocols such as BACNet, Modbus and CANbus, to modern wireless mesh networks like ZigBee and 6LoWPAN.

https://i.dell.com/sites/doccontent/corporate/secure/en/Documents/edge-gateway-specsheet.pdf,

22.   In the CANbus protocol, there is no explicit address in the messages. I   nstead, each message carries a numeric value that controls its priority on the bus, and the numeric value would also serve as an identification of the contents of the message.

> The CAN Bus protocol can be summarized in the following manner:
>
> - The physical layer uses differential transmission on a twisted pair wire
> - A non-destructive bit-wise arbitration is used to control access to the bus
> - The messages are small (at most eight data bytes) and are protected by a checksum
> - There is no explicit address in the messages, instead, each message carries a numeric value which controls its priority on the bus, and may also serve as an identification of the contents of the message
> - An elaborate error handling scheme that results in retransmitted messages when they are not properly received
> - There are effective means for isolating faults and removing faulty nodes from the bus
>
> CAN Bus has a multi-master capability meaning any node on the bus can initiate communication to any other node in a network.

https://www.typhoon-hil.com/documentation/typhoon-hil-schematic-editor-

library/References/can_bus_protocol.html

23.   A router connected to the internet assigns an IP address to the Accused Product. The Accused Product can connect to multiple IoT devices (i.e., terminals) such as sensors. The legacy systems, IoT devices, or sensors are assigned unique identifiers. The legacy systems and the sensors (connected via one of the CANbus, Modbus, Zigbee, etc) can be accessed by the

network (i.e., communication network) with the help of the Accused Product using the IP address

that is associated with the Accused Product.

| 6 | Ethernet port one (with Power over Ethernet support) | Connect an Ethernet (RJ45) cable to gain network access. Provides data transfer speeds up to 10/100 Mbps and supports Alternative A of the IEEE 802.3af standard. ⓘ NOTE: The Edge Gateway is an IEEE 802.3af Alternative A compliant Powered Device (PD). |

https://topics-cdn.dell.com/pdf/dell-edge-gateway-3000-series_users-guide2_en-us.pdf, Page 7

1. Connect a network cable from Ethernet port one on the Edge Gateway to a DHCP-enabled network or router that provides IP addresses.
2. In your network's DHCP server, use the command `dhcp-lease-list` to obtain the IP address associated with the Edge Gateway's MAC address.

https://topics-cdn.dell.com/pdf/dell-edge-gateway-3000-series_users-guide2_en-us.pdf

power consumption per transmission. An IoT gateway with IP functionality collects data from a bunch of sensors using the local wireless link and transfers this data to the Internet on their behalf. Instead of an IP address, each of these IoT devices is assigned with a unique identifier compatible with its built-in wireless link.

https://behrtech.com/blog/3-facts-about-iot-devices-every-tech-leader-should-know/

24.   In view of preceding paragraphs, each and every element of at least claim 6 of the '020 Patent is found in the Accused Products.

25.   Upon information and belief, each and every element of at least one claim of the patent-in-suit is performed or practiced by Defendants at least through Defendants' own use and configuration of its own Accused Products, and/or through Defendants' own testing and configuration of its own Accused Products, and/or through Defendants' providing services for its Accused Products, including but not limited to providing installation, deployment, support and configuration of its Accused Products.

26.   Defendants continue to directly infringe at least one claim of the '020 Patent, literally or under the doctrine of equivalents, by making, using, selling, offering for sale, importing,

and/or distributing the Accused Products in the United States, including within this judicial district, without the authority of Brazos.

27.   In May 2020, Plaintiff filed a suit against Defendants asserting infringement of the same patent and by the same accused products that are asserted in this case. Plaintiff dismissed the prior suit before filing this suit. As a result of the prior suit, Defendants had notice and actual or constructive knowledge of their infringement of the patent-in-suit since at least May 2020, before the filing of this case. Further, Defendants had knowledge of their infringement of the patent-in-suit before the filing of this Amended Complaint.[1]

28.   Since at least May 2020, through its actions, Defendants have actively induced product makers, distributors, retailers, and/or end users of the Accused Products to infringe the '020 Patent throughout the United States, including within this judicial district, by, among other

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[1] Dell filed a motion to dismiss that is mooted by this amended complaint. Dell's motion cites a WDTX case (which relies authority from the District of Delaware) for the proposition that knowledge of a plaintiff's patent after the lawsuit was filed is insufficient to plead the requisite knowledge for indirect infringement. *See Aguirre v. Powerchute Sports, LLC*, No. SA-10-CV-0702 XR, 2011 WL 2471299, at *3 (W.D. Tex. June 17, 2011) (citing *Xpoint Techs. v. Microsoft Corp.*, 730 F.Supp.2d 349 (D. Del. 2010)). Several Delaware courts have since rejected this rule because there is no statutory basis to support it and because there is no purpose served by the formality of requiring the plaintiff to file an amended complaint in order to be allowed to assert knowledge of the patents during the period following the filing of the original complaint. *See Walker Digital, LLC v. Facebook, Inc.*, 852 F. Supp. 2d 559, 566 (D. Del. 2012) ("The court acknowledges that this result is inconsistent with its prior decisions in *Xpoint Techs. v. Microsoft Corp.*, 730 F.Supp.2d 349 (D.Del.2010), and *EON Corp. IP Holdings LLC v. FLO TV Inc.*, 802 F.Supp.2d 527 (D. Del. 2011). Given the ease of amendment, the limitation of damages to post-knowledge conduct, and in the interests of judicial economy, the court finds that the better reasoning is to allow a complaint that satisfies Rule 8 to proceed to discovery rather than dismissing it for lack of pre-filing knowledge when, by the time the motion to dismiss has been filed, defendant in fact has the requisite knowledge as pled by plaintiff."); *see also IOENGINE, LLC v. PayPal Holdings, Inc*., CV 18-452-WCB, 2019 WL 330515, at *4 (D. Del. Jan. 25, 2019) ("The Court sees no purpose that would be served by the formality of requiring IOENGINE to file an amended complaint in order to be allowed to assert knowledge of the patents during the period following the filing of the original complaint.").

things, advertising and promoting the use of the Accused Products in various websites, including

providing and disseminating product descriptions, operating manuals, and other instructions on

how to implement and configure the Accused Products. Examples of such advertising, promoting,

and/or instructing include the documents at:

- https://www.dell.com/en-us/work/shop/gateways-embedded-computing/sf/edge-gateway
- https://www.dell.com/ae/business/p/dell-edge-gateway-5000/pd

29.   Since at least May 2020, through its actions, Defendants have contributed to the

infringement of the '020 Patent by having others sell, offer for sale, or use the Accused Products

throughout the United States, including within this judicial district, with knowledge that the

Accused Products infringe the '020 Patent. The Accused Products are especially made or adapted

for infringing the '020 Patent and have no substantial non-infringing use. For example, in view of

the preceding paragraphs, the Accused Products contain functionality which is material to at least

one claim of the '020 Patent.

JURY DEMAND

Brazos hereby demands a jury on all issues so triable.

REQUEST FOR RELIEF

WHEREFORE, Brazos respectfully requests that the Court:

(A)   Enter judgment that Defendants infringe one or more claims of the '020 Patent

literally and/or under the doctrine of equivalents;

(B)   Enter judgment that Defendants have induced infringement and continue to induce

infringement of one or more claims of the '020 Patent;

(C)   Enter judgment that Defendants have contributed to and continue to contribute to the infringement of one or more claims of the '020 Patent;

(D)   Award Brazos damages, to be paid by Defendants in an amount adequate to compensate Brazos for such damages, together with pre-judgment and post-judgment interest for the infringement by Defendants of the '020 Patent through the date such judgment is entered in accordance with 35 U.S.C. § 284, and increase such award by up to three times the amount found or assessed in accordance with 35 U.S.C. § 284;

(E)   Declare this case exceptional pursuant to 35 U.S.C. § 285; and

(F)   Award Brazos its costs, disbursements, attorneys' fees, and such further and additional relief as is deemed appropriate by this Court.

Dated: May 20, 2020   Respectfully submitted,

/s/ James L. Etheridge
James L. Etheridge
Texas State Bar No. 24059147
Ryan S. Loveless
Texas State Bar No. 24036997
Travis L. Richins
Texas State Bar No. 24061296

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